# Checkpoint Task

# Particles, Atoms and Elements

## Instructions and answers for teachers

These instructions cover the student activity section which can be found on [page 9](#_Learner_Activity). This Checkpoint Task should be used in conjunction with the KS3–4 GCSE (9-1) Gateway Science Chemistry A and Twenty First Century Science Chemistry B Transition Guide: Particles, Atoms and Elements, which supports OCR GCSE (9-1) Gateway Science Chemistry A and Twenty First Century Science Chemistry B.

**When distributing the activity section to the students either as a printed copy or as a Word file you will need to remove the teacher instructions section.**

### Introduction

This activity provides a check to see if the concepts of atoms and the periodic table taught at KS3 have been fully understood by students. It consists of 15 multiple choice questions giving the students the opportunity to show their understanding of element classification and the structure of the atom.

**ABC –** This activity offers an opportunity for English skills development.

Put a tick in the box next to the correct answer for each question.

**Question 1**

How many protons does Lithium have?

4

7

10



3

**Question 2**

Which element has two electrons in its first shell and four in the next shell?

Nitrogen



Carbon

Berylium

Fluorine

**Question 3**

Which is group 1 on the periodic table?



Alkali metals

Halogens

Noble Gases

Transition metals

**Question 4**

How many neutrons does Fluorine have?

28

19

10



9

**Question 5**

Which is not found in the middle of an atom?

Protons

Nucleus

Neutrons



Electrons

**Question 6**

Which is not a Noble Gas?

Argon

Neon



Bromine

Helium

**Question 7**

Which is in the same group as Magnesium?

Calcium



Iron

Carbon

Potassium

**Question 8**

Which has a positive charge?

Neutron

Electron



Protons

Nucleus

**Question 9**

Roughly how many elements are on the periodic table?



100

200

300

900

**Question 10**

How many electrons can the first shell hold?



2

4

8

10

**Question 11**

Which element has a total of 32 protons and neutrons?

Aluminium



Sulphur

Sodium

Germanium

**Question 12**

Which element is a Noble gas found in balloons?

Neon

Oxygen

Argon



Helium

**Question 13**

Which of the following is not a compound?

Carbon Dioxide

Sodium Chloride



Nitrogen

Water

**Question 14**

Which is not a transition metal?

Zn

Hg



Sn

Rh

**Question 15**

Which atom is the smallest non-metal?

Lithium

Helium

Boron



Hydrogen

### Quiz follow on

Nucleus

Electron



Proton

Neutron

1. Label the diagram with the following words:

Proton Neutron Nucleus Electron

1. Complete the sentences:
2. The element in the picture is

Boron

three

1. The element is in group on the periodic table.
2. Is this the same group as Be or Al or C?

Same as Al.

1. What is the atomic mass of this element?

Mass of 11.

1. Complete the diagram by adding more electrons in the correct place.

Further three electrons added to the outer shell.

1. Explain whether you think the element is a metal or a non-metal.

It is a non-metal even though other elements in the group are metals and metalloids.

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